

Permit Number: WP3931SD Operator: Kennametal UK Ltd
Installation: Newport Ceramics Form Number: Performance1

Reporting of other performance indicators for the period 01/01/2017 to 31/12/2017

Parameter	Units
Water usage 3228/181.055	m ³ /tonne product 17.83
Energy usage 8006/181.055	MWh/tonne product 44.2
Effluent released 2905/181.055	M ³ /tonne product 16.05

Operator's comments :

Effluent released calculated as 90% of total incoming water (mains)

Signed *J. Tuham*
(Authorised to sign as representative of Operator)

Date *31/1/18*

Permit Number: WP3931SD Operator: Kennametal UK Ltd
 Installation: Newport Ceramics Form Number: Energy1

Reporting of Energy Usage for the year 2017

Energy Source	Energy Usage Quantity	Primary Energy (MWh)	Specific Usage (MWh/unit output)
Electricity *	8006 MWh	19214	44.2 MWh/tonne product
Natural Gas	0 tonnes	n/a	n/a
TOTAL	8006 MWh	19214 MWh	44.2 MWh/tonne product

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

The specific energy usage has been calculated based on powder production and hot pressing. Although powder production and hot pressing are responsible for the majority of the electricity consumed on site, this is a slight over estimate as some of the electricity used on site is used in the production of other products.

The specific energy usage is lower than last year. However, this figure is affected to some degree by differences in the quantities that different products that are produced. Some products require more energy to produce than others.

Signed J. Whelan
 (Authorised to sign as representative of Operator)

Date 31/1/18

Permit Number: WP3931SD Operator: Kennametal Manufacturing UK Ltd
Installation: Newport Ceramics Form Number: WaterUsage1

Reporting of Water Usage for the year 2017

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)
Mains water	3228 m ³	17.83 m ³ /tonne of product

Operator's comments :

More frequent flushing of wet scrubber liquor was adopted for 3 months in an unsuccessful attempt to better control air emissions.

Signed *J. Whan* Date: 31/1/18
(authorised to sign as representative of Operator)